

```

/*
Experiment No. :    04

Statement      :    Fade and brighten 5 LEDs alternatively.

Date of Exp.   :    xx/xx/xxxx

Author        :    Mansi Mandhane (A-24)

*/

int ledPins[] = {9,10,11,12,13}; // Array to store the pin
numbers of LEDs. Currently empty.

int ledCount = 5; // Number of LEDs connected, currently set to
5.

void setup()

{

for(int i=0; i < ledCount; i++) // Loop through each LED pin.

{

pinMode(ledPins[i],OUTPUT); // Set the mode of the pin to OUTPUT
for each LED.

}

}

void fadeLed(int pin)

{

// Fade in loop: increase brightness gradually from 0 to 255.
for (int brightness = 0; brightness <= 255; brightness +=5)

{

analogWrite(pin,brightness); // Set the brightness of the LED.

delay(30); // Delay to control the fading speed.

```

```

}

// Fade out loop: decrease brightness gradually from 255 to 0.
for (int brightness = 255; brightness >= 0; brightness -=5)
{
  analogWrite(pin,brightness); // Set the brightness of the LED.
  delay(30); // Delay to control the fading speed.
}
}

void loop()
{
  for (int i=0 ; i < ledCount ; i++) // Loop through each LED.
  {
    fadeLed(ledPins[i]); // Call the fadeLed function to fade each
    LED.
  }
}

```

